

Castle Cement Limited

Carbon Capture Storage Project – Padeswood, North Wales

Volume 4, Draft Technical Appendix 9.2

LANDMAP Dataset





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1 LANDMAP DATASETS

1.1 Table 1.1 details the Geological Landscape and Landscape Habitats datasets which overlap with, or are adjacent to, the Site boundary; and the Cultural Landscape Services datasets which are within 5km of the Site boundary and within the ZTV. The table also details whether the datasets are scoped in or out of the landscape and visual assessment, based on guidance set out in Guidance Note 46. For ease of reference, the LANDMAP areas scoped in to the assessment have been highlighted in bold text.

Table 1.1 Geological Landscape and Landscape Habitats datasets which overlap with, or are adjacent to, the Site and in the ZTV, or geologically have a special relationship with the host dataset; and Cultural Landscape Services datasets which are within 5km of the Site and within the ZTV

Dataset	Aspect ID	Name	Overall evaluation	Scoped in or out
	FLNTGL752	Northop-Buckley- Broughton	Moderate	In – overlaps with site
	FLNTGL915	Berthengam-Lloc	Moderate	Out – evaluated as moderate for Q31 and Q33 survey questions
	FLNTGL222 Calcot High	Out - special relationship with host dataset but outside the ZTV		
Geological Landscap e	FLNTGL101	Connah's Quay- Oakenholt	Moderate	Out – evaluated as low for Q31 and moderate for Q33 survey questions
	FLNTGL869	Flint-Bagilt	Moderate	Out – evaluated as low for Q31 and moderate for Q33 survey questions
	FLNTGL105	Gronant-Helyg- Garmel	Moderate	Out – evaluated as low for Q31 and moderate for Q33 survey questions
	FLNTGL435	Gwysaney	Moderate	Out – evaluated as low for Q31 and moderate



Dataset	Aspect ID	Name	Overall evaluation	Scoped in or out
				for Q33 survey questions
	FLNTGL196	Hawarden	Moderate	Out – evaluated as low for Q31 and moderate for Q33 survey questions
	FLNTGL650	Leeswood	Moderate	Out – evaluated as low for Q31 and moderate for Q33 survey questions
	FLNTGL630	Mold	Moderate	Out – evaluated as low for Q31 and moderate for Q33 survey questions
	FLNTGL487	Old Warren	Moderate	Out – evaluated as low for Q31 and moderate for Q33 survey questions
	FLNTGL352	Padeswood-Hope	High	In – in ZTV and evaluated as high for Q33 survey questions
	FLNTGL726	Rhos Ithel	Moderate	Out – evaluated as low for Q31 and moderate for Q33 survey questions
	FLNTGL596	Rhosesmor	High	In – special relationship with host dataset and in ZTV and evaluated as high for Q33 survey question
	FLNTGL549	Treuddyn	Moderate	Out – evaluated as low for Q31 and moderate



Dataset	Aspect ID	Name	Overall evaluation	Scoped in or out
				for Q33 survey questions
	FLNTGL875	Tyddnuchaf	Moderate	Out – evaluated as moderate for Q31 and Q33 survey questions
	FLNTGL361	Hope Mountain	High	In – special relationship with host dataset and in ZTV and evaluated as high for Q33 survey question
	FLNTGL242	River Terrig-Nant Brook	High	In – adjacent to site, in ZTV and evaluated as high for Q31 and Q33 survey questions
	FLNTLH038	Buckley Mosaic	Moderate	In – overlaps with site
Landscap e Habitats	FLNTLH034	Alun Valley Mosaic	High	In – in ZTV and evaluated as high for Q42 and Q45 survey questions
	FLNTCLS021	N/A (region Flintshire)	N/A	In – overlaps with site
Cultural	FLNTCLS024	N/A (region Flintshire)	N/A	In – within 5km of Site and in ZTV
Landscap e Services	FLNTCLS132	Hawarden Parkland	N/A	In – within 5km of Site and in ZTV
	FLNTCLS133	Hawarden Parkland	N/A	In – within 5km of Site and in ZTV



Dataset	Aspect ID	Name	Overall evaluation	Scoped in or out
	FLNTCLS059	N/A (region Flintshire)	N/A	In – within 5km of Site and in ZTV
	FLNTCLS026	N/A (region Flintshire)	N/A	In – within 5km of Site and in ZTV
	FLNTCLS102	Llanfynydd to Higher Kinnerton Farmland	N/A	In – within 5km of Site and in ZTV
	FLNTCLS103	Llanfynydd to Higher Kinnerton Farmland	N/A	In – within 5km of Site and in ZTV
	FLNTCLS111	Llanfynydd Narrow Valley	N/A	In – within 5km of Site and in ZTV
	FLNTCLS100	Hope Mountain	N/A	In – within 5km of Site and in ZTV
	FLNTCLS140	Mold Southern Fringe Farmland	N/A	In – within 5km of Site and in ZTV
	FLNTCLS030	N/A (region Flintshire)	N/A	In – within 5km of Site and in ZTV
	FLNTCLS062	N/A (region Flintshire)	N/A	In – within 5km of Site and in ZTV
	FLNTCLS069	N/A (region Flintshire)	N/A	In – within 5km of Site and in ZTV
	FLNTCLS029	Treuddyn Rolling Farmland	N/A	In – within 5km of Site and in ZTV

1.2 **Table 1.2** details the Visual and Sensory and Historic Landscape datasets within a 5km Study Area and whether they are scoped in or out of the landscape and visual assessment, based on guidance set out in <u>Guidance Note 46</u>¹. For ease of reference, the LANDMAP areas scoped into the assessment have been highlighted in **bold text**.

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¹ <u>https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/evidence-to-inform-development-planning/using-landmap-in-landscape-and-visual-impact-assessments-gn46/?lang=en</u>



Table 1.2 Visual and Sensory and Historic Landscapes within 5km of the Site

Dataset	Aspect ID	Name	Overall evaluation	Scoped in or out
	FLNTVS009	N/A (region Flintshire)	Moderate	In – overlaps with Site
	FLNTVS034	N/A (region Flintshire)	Moderate	Out – moderate for survey questions 46, 48 & 50
	FLNTVS033	N/A (region Flintshire)	Moderate	Out – moderate for survey questions 46, 48 & 50
	FLNTVS085	Hawarden Parkland	Moderate	Out – moderate for survey questions 46, 48 & 50
Visual and Sensory	FLNTVS032	N/A (region Flintshire)	Moderate	Out – moderate for survey questions 46, 48 & 50
	FLNTVS069	Llanfynydd to Higher Kinnerton Farmland	Moderate	Out – moderate for survey questions 46, 48 & 50
	FLNTVS012	N/A (region Flintshire)	Moderate	Out – moderate for survey questions 46, 48 & 50
	FLNTVS068	Hope Mountain	Moderate	Out – moderate for survey questions 46, 48 & 50
	FLNTVS091	Mold Southern Fringe Farmland	Moderate	Out – moderate for survey questions 46, 48 & 50



Dataset	Aspect ID	Name	Overall evaluation	Scoped in or out
	FLNTVS041	N/A (region Flintshire)	Moderate	Out – moderate for survey questions 46, 48 & 50
	FLNTVS013	N/A (region Flintshire)	Low	Out – low overall
	FLNTVS074	Llanfynydd Narrow Valley	High	In – within ZTV and overall evaluation high
	FLNTVS023	N/A (region Flintshire)	Low	Out – outside ZTV
	FLNTVS077	Broughton Farmland	Moderate	Out – moderate for survey questions 46, 48 & 50
	FLNTVS040	N/A (region Flintshire)	Moderate	Out – moderate for survey questions 46, 48 & 50
	FLNTVS087	Caergwrle Slopes	High	In – within ZTV and overall evaluation high
	FLNTVS071	Treuddyn Rolling Farmland	Moderate	Out – moderate for survey questions 46, 48 & 50
	FLNTVS035	N/A (region Flintshire)	Moderate	Out – outside ZTV
	FLNTVS045	N/A (region Flintshire)	Moderate	Out – outside ZTV
Historic Landscapes	FLNTHL636	Padeswood	Moderate	In – overlaps with site



Dataset	Aspect ID	Name	Overall evaluation	Scoped in or out
	FLNTHL213	Northop Hall	High	In – within ZTV and overall evaluation high
	FLNTHL846	Buckley & Ewloe	Moderate	Out – moderate overall
	FLNTHL581	Penymynydd	Moderate	Out – moderate overall
	FLNTHL396	Hawarden Castle	Outstanding	Out – outside ZTV
	FLNTHL354	Hawarden	Outstanding	Out – outside ZTV
	FLNTHL538	St Deiniol's Ash & Aston Hall	High	Out – outside ZTV
	FLNTHL487	The Rakes	High	Out – outside ZTV
	FLNTHL766	Broughton	Low	Out – outside ZTV
	FLNTHL555	Penyfford	Low	Out – low overall
	FLNTHL745	Kinnerton	High	In – within ZTV and overall evaluation high
	FLNTHL579	Caergwle & Hope	Outstanding	In – within ZTV and overall evaluation outstanding
	FLNTHL953	Mold	High	In – within ZTV and overall evaluation high



Dataset	Aspect ID	Name	Overall evaluation	Scoped in or out
	FLNTHL349	Lleeswood	High	In – within ZTV and overall evaluation high

1.3 Likely effects on the LANDMAP datasets included within the assessment, as detailed in the above tables, are detailed below in **Table 1.3** to **Table 1.7**.

Table 1.3 Landscape Effects on LANDMAP Geological Landscape Datasets

Landscape Effec	Landscape Effects on LANDMAP Geological Landscape Datasets				
•	scape FLNTGL752 Northop-Buckley-Broughton				
Location and Natural Resources Wales description, evaluation and other notes	Occupies the bulk of the centre, north and east of the Study Area and hosts the Site. Extends over the landscape to the north west of the Study Area. Forms part of the extensive glacial drift cover of eastern Flintshire. Extensive boulder clay blanketed terrain; stepped down towards the sea in the north west due to the influence of buried scarps of Carboniferous sandstone units, but forming a gentle more even slope in the south east. Scattered outcrops of Carboniferous and Permian rocks (the latter in the south east only) locally show through the glacial cover. Overall area typical of widespread glacial deposit cover of the county, although locally important sites do exist (Kinnerton potential RIGS site - type locality of Kinnerton Sandstone Formation).				
	Guidelines/ Management – Ensure that potential RIGS site is assessed and consequently safeguarded using Local Plan policies and constraint mapping. And over the long term ensure that other significant features of geological or geomorphological significance in the area (including former coal mine sites) are not lost/damaged due to development.				
Summary of Effects	There would be earthworks to accommodate the foundations and infrastructure of the Proposed Development; however the proposals would not damage notable geological features and there would be no change to the Natural Resources Wales description and evaluation of the dataset.				
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – Moderate Susceptibility – Medium Sensitivity – Medium/Low				
Scale, extent and duration of change	Construction – Medium and localised – Moderate/Slight short- term Years 1-10 – Medium and localised – Moderate/Slight medium-term				



Year 10 onwards - Medium and localised - Moderate/Slight long-term	Landscape Effec	ets on LANDMAP Geological Landscape Datasets
Change		
Year 10 onwards – Moderate Level of effect Construction – Minor adverse Years 1-10 – Moderate/ Minor adverse Years 1-10 – Moderate/ Minor adverse Year 10 onwards – Moderate/ Minor adverse and Not Significant Geological Landscape FLNTGL352 Padeswood-Hope Cocation and Natural Resources Wales Gescription, evaluation and other notes Core part of the River Allyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms glacial sand and gravel dominate flanks of the broad River Allyn valley between Mold and Hope. Includes a complex area of mounds and hollows - including a lake basin - in the Coppa House area which may included kettleholes. Distinctive knoll of Carboniferous sandstone (Caer Estyn) also included on east side of Hope and separated from main outcrop to west by Allyn valley. Includes complex of glacial features/deposits in the Coppa House area; also lacustrine deposits with probable climactic record, alluvial fan. Guidelines/ Management – Ensure that no significant features of geological or geomorphological significance are lost/damaged due to quarrying or expansion of golf course. The Proposed Development would not damage notable geological features and there would be no change to the Natural Resources Wales description and evaluation of the dataset. Value, susceptibility and sensitivity Scale, extent and duration of change Magnitude of Construction – Small and limited – Slight/Negligible short-term Year 1-10 – Small and limited – Slight/Negligible long- term Magnitude of Construction – Negligible Year 1-10 – Negligible Year 1-10 – Negligible	Magnitude of	Construction – Slight
Level of effect Construction – Minor adverse Years 1-10 – Moderate/ Minor adverse Year 10 onwards – Moderate/ Minor adverse and Not Significant Ceological Landscape FLNTGL352 Padeswood-Hope Cocupies a strip of landscape within the west and south of the Natural Resources Wales description, evaluation and other notes Copy and the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms glacial sand and gravel dominate flanks of the broad River Alyn valley between Mold and Hope. Includes a complex area of mounds and hollows - including a lake basin - in the Coppa House area which may included kettleholes. Distinctive knoll of Carboniferous sandstone (Caer Estyn) also included on east side of Hope and separated from main outcrop to west by Alyn valley. Includes complex of glacial features/deposits in the Coppa House area; also lacustrine deposits with probable climactic record, alluvial fan. Guidelines/ Management – Ensure that no significance are lost/damaged due to quarrying or expansion of golf course. Summary of Effects The Proposed Development would not damage notable geological features and there would be no change to the Natural Resources Wales description and evaluation of the dataset. Value, susceptibility and sensitivity Scale, extent and duration of change Magnitude of Construction – Small and limited – Slight/Negligible short-term Years 1-10 – Small and limited – Slight/Negligible medium- term Year 10 onwards – Small and limited – Slight/Negligible long- term Magnitude of Change Construction – Negligible Years 1-10 – Negligible Years 1-10 – Negligible	Change	Years 1-10 – Moderate
Years 1-10 – Moderate/ Minor adverse Year 10 onwards – Moderate/ Minor adverse and Not Significant Ceological Landscape FLNTGL352 Padeswood-Hope Occupies a strip of landscape within the west and south of the Study Area and is directly adjacent to the south west corner of the Site. The construction works would be outside the dataset. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flin		Year 10 onwards – Moderate
Year 10 onwards - Moderate/ Minor adverse and Not Significant	Level of effect	Construction – Minor adverse
Significant		Years 1-10 – Moderate/ Minor adverse
Location and Natural Resources Wales description, evaluation and other notes Occupies a strip of landscape within the west and south of the Study Area and is directly adjacent to the south west corner of the Site. The construction works would be outside the dataset. Forms part of the River Alyn valley and part of extensive glacial drift cover of eastern Flintshire. Forms glacial sand and gravel dominate flanks of the broad River Alyn valley between Mold and Hope. Includes a complex area of mounds and hollows - including a lake basin - in the Coppa House area which may included kettleholes. Distinctive knoll of Carboniferous sandstone (Caer Estyn) also included on east side of Hope and separated from main outcrop to west by Alyn valley. Includes complex of glacial features/deposits in the Coppa House area; also lacustrine deposits with probable climactic record, alluvial fan. Guidelines/ Management – Ensure that no significant features of geological or geomorphological significance are lost/damaged due to quarrying or expansion of golf course. Summary of Effects The Proposed Development would not damage notable geological features and there would be no change to the Natural Resources Wales description and evaluation of the dataset. Value, susceptibility and sensitivity Scale, extent and duration of change Construction – Small and limited – Slight/Negligible short-term Years 1-10 – Small and limited – Slight/Negligible medium-term Year 10 onwards – Small and limited – Slight/Negligible long-term Magnitude of Construction – Negligible Year 10 onwards – Slight/Negligible		
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other notes Forms glacial sand and gravel dominate flanks of the broad River Alyn valley between Mold and Hope. Includes a complex area of mounds and hollows - including a lake basin - in the Coppa House area which may included kettleholes. Distinctive knoll of Carboniferous sandstone (Caer Estyn) also included on east side of Hope and separated from main outcrop to west by Alyn valley. Includes complex of glacial features/deposits in the Coppa House area; also lacustrine deposits with probable climactic record, alluvial fan. Guidelines/ Management – Ensure that no significant features of geological or geomorphological significance are lost/damaged due to quarrying or expansion of golf course. Summary of Effects	Natural Resources Wales description,	Study Area and is directly adjacent to the south west corner of the Site. The construction works would be outside the dataset. Forms part of the River Alyn valley and part of extensive
House area; also lacustrine deposits with probable climactic record, alluvial fan. Guidelines/ Management – Ensure that no significant features of geological or geomorphological significance are lost/damaged due to quarrying or expansion of golf course. Summary of Effects The Proposed Development would not damage notable geological features and there would be no change to the Natural Resources Wales description and evaluation of the dataset. Value, susceptibility and sensitivity Scale, extent and duration of change Construction – Small and limited – Slight/Negligible short-term Years 1-10 – Small and limited – Slight/Negligible mediumterm Year 10 onwards – Small and limited – Slight/Negligible longterm Magnitude of Construction – Negligible Years 1-10 – Negligible Years 1-10 – Negligible Years 1-10 – Negligible		River Alyn valley between Mold and Hope. Includes a complex area of mounds and hollows - including a lake basin - in the Coppa House area which may included kettleholes. Distinctive knoll of Carboniferous sandstone (Caer Estyn) also included on east side of Hope and separated from main outcrop to west
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and sensitivity Sensitivity – Medium/Low Scale, extent and duration of change Construction – Small and limited – Slight/Negligible short-term Years 1-10 – Small and limited – Slight/Negligible medium-term Year 10 onwards – Small and limited – Slight/Negligible long-term Magnitude of Change Construction – Negligible Years 1-10 – Negligible Year 10 onwards – Slight/Negligible	Value,	LANDMAP Overall Evaluation – High
Scale, extent and duration of change Construction – Small and limited – Slight/Negligible short-term Years 1-10 – Small and limited – Slight/Negligible mediumterm Year 10 onwards – Small and limited – Slight/Negligible longterm Magnitude of Construction – Negligible Years 1-10 – Negligible Year 10 onwards – Slight/Negligible		Susceptibility – Low
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Year 10 onwards – Small and limited – Slight/Negligible long- term Magnitude of Construction – Negligible Change Years 1-10 – Negligible Year 10 onwards – Slight/Negligible		
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Magnitude of Construction – Negligible Years 1-10 – Negligible Year 10 onwards – Slight/Negligible		
Change Years 1-10 – Negligible Year 10 onwards – Slight/Negligible	Magnitude of	
Year 10 onwards – Slight/Negligible	•	
	Level of effect	



Landscape Effec	Landscape Effects on LANDMAP Geological Landscape Datasets				
	Years 1-10 – Negligible adverse				
	Year 10 onwards – Minor/ Negligible adverse and Not Significant				
Geological Land	scape FLNTGL596 Rhosesmor				
Location and Natural Resources Wales description, evaluation and other notes	Dataset is located between 9km and 12km north-west of the Site but has been included in the assessment, due to its special relationship with the host dataset (FLNTGL752 Northop-Buckley-Broughton) forming part of the extensive glacial drift cover of eastern Flintshire, being in the ZTV and its overall 'High' evaluation. Relatively small area of boulder clay cover forming a sloping platform with an incised valley on the south east side of the Halkyn Mountain Carboniferous massif. Area includes important Holywell Shales exposure (Ruby Brickworks RIGS - Carboniferous stratigraphy). Guidelines/ Management – Ensure that RIGS site is safeguarded using Local Plan policies and constraint mapping				
	and that other significant features of geological or geomorphological significance in the area are not lost/damaged due to development.				
Summary of Effects	None				
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – High Susceptibility – Low Sensitivity – Medium/Low				
Scale, extent and duration of change	Construction – No change Years 1-10 – No change Year 10 onwards – No change				
Magnitude of Change	Construction – No change Years 1-10 – No change Year 10 onwards – No change				
Level of effect	Construction – None Years 1-10 – None Year 10 onwards – None				
Geological Landscape FLNTGL361 Hope Mountain					
Location and Natural Resources Wales description, evaluation and other notes	Occupies the landscape around Hope Mountain between 3km and 7km south of the Site, forming part of the Carboniferous sandstone ridge. A distinctive steep-sided massive of sandstone-dominated Carboniferous, rising above Hope and the Alyn and Cegidog valleys. Some limestone to the south also. Flanks include boulder clay apron to the south west and north west and a glacial sand and gravel terrace to the south east.				



Landscape Effects on LANDMAP Geological Landscape Datasets		
	A major landscape feature; includes Caergwle Castle RIGS (Carboniferous stratigraphy, Cefn-y-fedw Sandstone Formation) Guidelines/ Management – Ensure that RIGS sites is safeguarded using Local Plan policies and constraint mapping and that other significant features of geological or geomorphological significance in the area are not lost/damaged due to development, infill.	
Summary of Effects	None	
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – High Susceptibility – Low Sensitivity – Medium/Low	
Scale, extent and duration of change	Construction – No change Years 1-10 – No change Year 10 onwards – No change	
Magnitude of Change	Construction – No change Years 1-10 – No change Year 10 onwards – No change	
Level of effect	Construction – None Years 1-10 – None Year 10 onwards – None	
Geological Land	scape FLNTGL242 River Terrig-Nant Brook	
Location and Natural Resources Wales description, evaluation and	A narrow strip of landscape within the south and west of the Study Area, which passes approximately 250m south of the Site boundary; and extends to the north west out of the Study Area. A branching river-stream valley system, now flowing to the main Alyn valley in three separate locations from near Mold to	
other notes	south of Hope. Typically steep-sided and incised through glacial clay cover to expose underlying Carboniferous solid geology. Minor, very narrow floodplain developed in places. Where the latter is more extensive in the south it is separated as the River Cegidog Aspect Area (FLNTGL986). Former workings for coal present.	
	Guidelines/ Management – Ensure that no significant features of geological or geomorphological significance are lost/damaged, for instance due to development or reclamation of former mine workings.	
Summary of Effects	None	
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – High Susceptibility – Low Sensitivity – Medium/Low	



Landscape Effects on LANDMAP Geological Landscape Datasets	
Scale, extent and duration of change	Construction – No change
	Years 1-10 – No change
	Year 10 onwards – No change
Magnitude of Change	Construction – No change
	Years 1-10 – No change
	Year 10 onwards – No change
Level of effect	Construction – None
	Years 1-10 – None
	Year 10 onwards – None

Table 1.4 Landscape Effects on LANDMAP Landscape Habitats Datasets

Landscape Effec	Landscape Effects on LANDMAP Landscape Habitats Datasets	
Landscape Habitats FLNTLH038 Buckley Mosaic		
Location and Natural	A large aspect area (2,293 ha) which occupies the centre of the Study Area, and hosts the Site.	
Resources Wales description, evaluation and other notes	This is a mosaic of pasture land and arable land, the field sizes are small to moderate and many fields have hedges. There are several areas of ribbon woodlands which add to the biodiversity of the area. This area comprises pasture land, temporary grass leys for silage and some arable land; and has a few areas of locally significant woodland, several thicker hedges and therefore a moderate value. Guidelines/ Management – Many of the hedges are not	
	stockproof in their own right and would benefit by maintenance work and replanting of gaps with native species. Management of grasslands where there are native species present by reducing agricultural inputs to allow more native species to regenerate will enhance the biodiversity.	
Summary of Effects	There would be some loss of woodland and grassland within the Site boundary where the Carbon Capture Plant is located. Whilst there would be a medium to small scale impact landscape habitats within the Site there would be no discernible change to the aspect area or its evaluation. The impacts would be limited to the Site.	
	Mitigation proposals within the north east of the Site would introduce areas of rough grassland, deciduous woodland and four new ponds. In addition to this, there would be new planting introduced around the Carbon Capture Plant and additional planting in the north western area of the Site. The Landscape and Habitat Mitigation Strategic Proposals are provided in Volume 4, Technical Appendix 9.4.	
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – Moderate Susceptibility – Medium Sensitivity – Medium	



Landscape Effec	ts on LANDMAP Landscape Habitats Datasets
Scale, extent and duration of	Construction – Medium and intermediate – Moderate short-term
change	Years 1-10 – Medium and localised – Moderate/Slight medium-term
	Year 10 onwards – Medium and localised – Moderate/Slight long-term
Magnitude of Change	Construction – Moderate
Onlinge	Years 1-10 – Moderate Year 10 onwards – Moderate
Level of effect	Construction – Moderate/ Minor adverse Years 1-10 – Moderate/ Minor adverse Year 10 onwards – Moderate/ Minor adverse and Not
	Significant
-	tats FLNTLH034 Alun Valley Mosaic
Location and Natural Resources Wales description, evaluation and other notes	A narrow and relatively small area (973 ha) which occupies a thin strip of landscape orientated north west to south east within the south west of the Study Area. The northern boundary of the aspect area directly passes the southern boundary of the Site.
	This aspect area has a rich biodiversity. The land use is a network of permanent grassland, temporary grass leys and arable land. There are some thick hedges, and blocks of woodland and parkland. There are several small areas of semi-natural vegetation of local biodiversity importance. The network of hedges and woodland are likely to support a range of species including bats and birds, the ponds and streams form important habitats for invertebrates and amphibians. The area contains important native species and a number of locally significant habitats giving a high value.
	Guidelines/ Management – Many of the hedges are not stockproof in their own right and would benefit by maintenance work and replanting of gaps with native species. Management of grasslands where there are native species present by reducing agricultural inputs to allow more native species to regenerate will enhance the biodiversity.
Summary of Effects	Despite its proximity to the Site there would be no direct effects on this aspect area, and indirect effects would be kept to the absolute minimum and possibly avoided entirely. There would be no discernible change to the aspect area or its evaluation.
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – High Susceptibility – Low Sensitivity – Medium/ Low



Landscape Effects on LANDMAP Landscape Habitats Datasets	
Scale, extent and duration of change	Construction – Negligible and limited –Negligible short-term Years 1-10 – Negligible and limited –Negligible medium-term Year 10 onwards – Negligible and limited – Negligible long- term
Magnitude of Change	Construction – Negligible Years 1-10 – Negligible Year 10 onwards – Negligible
Level of effect	Construction – Negligible adverse Years 1-10 – Negligible adverse Year 10 onwards – Negligible adverse and Not Significant

Table 1.5 Landscape Effects on LANDMAP Cultural Landscape Services Datasets

Landscape Effec	Landscape Effects on LANDMAP Cultural Landscape Services Datasets	
Cultural Landsca	Cultural Landscape Services FLNTCLS021 Unnamed (region Flintshire)	
Location and Natural Resources Wales description, evaluation and other notes	Occupies a large area of land within the centre and north of the Study Area and encloses the town of Buckley (which is not in the aspect area). The Site is within this aspect area. Answers/evaluations to the LANDMAP survey questions regarding cultural interest in the aspect area are generally 'moderate' or 'no answer', but with some higher quality landscape habitat and historical elements.	
Summary of Effects	Within the south of the aspect area the Proposed Development would appear as an extension of the existing Padeswood Cement Works in a semi-urban landscape. There would be no discernible change to the aspect area.	
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – N/A; Value – Community Susceptibility – Low Sensitivity – Low	
Scale, extent and duration of change	Construction – Negligible and localised –Negligible short-term Years 1-10 – Negligible and localised –Negligible medium-term Year 10 onwards – Negligible and localised – Negligible long- term	
Magnitude of Change	Construction – Negligible Years 1-10 – Negligible Year 10 onwards – Negligible	
Level of effect	Construction – Negligible adverse Years 1-10 – Negligible adverse Year 10 onwards – Negligible adverse and Not Significant	
Cultural Landscape Services FLNTCLS024 Unnamed (region Flintshire)		



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Landscape Effect	ts on LANDMAP Cultural Landscape Services Datasets
Location and Natural	Occupies an area outside the north west of the Study Area for the Proposed Development.
Resources Wales description, evaluation and other notes	Answers/evaluations to the LANDMAP survey questions regarding cultural interest in the aspect area are generally 'moderate' or 'no answer', but with some higher quality landscape habitat, historical and scenic elements.
Summary of Effects	The operational Proposed Development would not be visible from the majority of this aspect area, and when visible it would only be visible in the context of existing views of the existing tower.
Value,	LANDMAP Overall Evaluation – N/A; Value – Community
susceptibility	Susceptibility – Low
and sensitivity	Sensitivity – Low
Scale, extent	Construction – Negligible and limited –Negligible short-term
and duration of	Years 1-10 – Negligible and limited –Negligible medium-term
change	Year 10 onwards – Negligible and limited – Negligible long- term
Magnitude of	Construction – Negligible
Change	Years 1-10 – Negligible
	Year 10 onwards – Negligible
Level of effect	Construction – Negligible adverse
	Years 1-10 – Negligible adverse
	Year 10 onwards – Negligible adverse and Not Significant
Cultural Landsca	ape Services FLNTCLS132 Hawarden Parkland
Location and Natural	Occupies the north east of the Study Area between 3km and 5km from the Site.
Resources Wales description, evaluation and other notes	Answers/evaluations to the LANDMAP survey questions regarding cultural interest in the aspect area are generally 'moderate' or 'no answer', but with some higher quality landscape habitat and historical elements.
Summary of Effects	Extremely small and isolated locations in the aspect area are within the ZTV. There would be no effect on this aspect area.
Value,	LANDMAP Overall Evaluation – N/A; Value – Community
susceptibility	Susceptibility – Low
and sensitivity	Sensitivity – Low
Scale, extent and duration of change	Construction – No change
	Years 1-10 – No change
	Year 10 onwards – No change
Magnitude of Change	Construction – No change
	Years 1-10 – No change
0	



Landscape Effec	ts on LANDMAP Cultural Landscape Services Datasets		
	Year 10 onwards – No change		
Level of effect	Construction – None		
	Years 1-10 – None		
	Year 10 onwards – None		
Cultural Landsca	ape Services FLNTCLS133 Hawarden Parkland		
Location and Natural Resources Wales description, evaluation and other notes	Occupies an area in the east of the Study Area between 900m and 4km from the Site. Answers/evaluations to the LANDMAP survey questions regarding cultural interest in the aspect area are generally 'moderate' or 'no answer', but with some higher quality landscape habitat elements.		
Summary of Effects	A small area approximately 1.5km east of the Site boundary is within the ZTV and the proposed flue gas stack would be visible within the context of existing views of the cement works. There would be no direct effects on this aspect area.		
Value,	LANDMAP Overall Evaluation – N/A; Value – Community		
susceptibility	Susceptibility – Low		
and sensitivity	Sensitivity – Low		
Scale, extent	Construction – Negligible and limited –Negligible short-term		
and duration of	Years 1-10 – Negligible and limited –Negligible medium-term		
change	Year 10 onwards – Negligible and limited – Negligible long- term		
Magnitude of	Construction – Negligible		
Change	Years 1-10 – Negligible		
	Year 10 onwards – Negligible		
Level of effect	Construction – Negligible adverse		
	Years 1-10 – Negligible adverse		
	Year 10 onwards – Negligible adverse and Not Significant		
Cultural Landsca	Cultural Landscape Services FLNTCLS059 Unnamed (region Flintshire)		
Location and Natural Resources Wales description, evaluation and other notes	Occupies an area within the east of the Study Area largely coincident with the village of Penyfford, and is 200m west of the Site boundary at its closest point.		
	Answers/evaluations to the LANDMAP survey questions regarding cultural interest in the aspect area are generally 'moderate' or 'no answer'.		
Summary of Effects	Within the aspect area the Proposed Development would often be visible, but it would appear as an extension of the existing Padeswood Cement Works in a semi-urban landscape.		
	There would be no direct effects on this aspect area.		



Landscape Effec	ets on LANDMAP Cultural Landscape Services Datasets
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – N/A; Value – Community Susceptibility – Low Sensitivity – Low
Scale, extent and duration of change	Construction – Negligible and localised –Negligible short-term Years 1-10 – Negligible and localised –Negligible medium-term Year 10 onwards – Negligible and localised – Negligible long- term
Magnitude of Change	Construction – Negligible Years 1-10 – Negligible Year 10 onwards – Negligible
Level of effect	Construction – Negligible adverse Years 1-10 – Negligible adverse Year 10 onwards – Negligible adverse and Not Significant
Cultural Landsca	ape Services FLNTCLS026 Unnamed (region Flintshire)
Location and Natural Resources Wales	Occupies the Study Area directly to the south of the Site boundary extending to approximately 2.8km to the south around the rural landscape of Pen-yr-allt.
description, evaluation and other notes	Answers/evaluations to the LANDMAP survey questions regarding cultural interest in the aspect area are predominantly 'moderate', but with some higher quality geological, landscape habitat and historical elements.
Summary of Effects	Within the aspect area the Proposed Development would often be visible, but it would appear as an extension of the existing Padeswood Cement Works in a semi-urban landscape. There would be no direct effects on this aspect area.
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – N/A; Value – Community Susceptibility – Low Sensitivity – Low
Scale, extent and duration of change	Construction – Negligible and localised –Negligible short-term Years 1-10 – Negligible and localised –Negligible medium-term Year 10 onwards – Negligible and localised – Negligible long-term
Magnitude of Change	Construction – Negligible Years 1-10 – Negligible Year 10 onwards – Negligible
Level of effect	Construction – Negligible adverse Years 1-10 – Negligible adverse Year 10 onwards – Negligible adverse and Not Significant
Cultural Landsca Farmland	ape Services FLNTCLS102 Llanfynydd to Higher Kinnerton



Landscape Effects on LANDMAP Cultural Landscape Services Datasets			
Location and Natural Resources Wales description, evaluation and other notes	A large aspect area occupying the south-east of the Study Area and extending to within 200m south-east of the Site boundary. Answers/evaluations to the LANDMAP survey questions regarding cultural interest in the aspect area are generally 'moderate' or 'no answer', but with some higher quality landscape habitat and historical elements.		
Summary of Effects	Within the aspect area the Proposed Development would occasionally be visible, but it would appear as an extension of the existing Padeswood Cement Works in a semi-urban landscape. There would be no direct effects on this aspect area.		
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – N/A; Value – Community Susceptibility – Low Sensitivity – Low		
Scale, extent and duration of change	Construction – Negligible and localised –Negligible short-term Years 1-10 – Negligible and localised –Negligible medium-term Year 10 onwards – Negligible and localised – Negligible long- term		
Magnitude of Change	Construction – Negligible Years 1-10 – Negligible Year 10 onwards – Negligible		
Level of effect	Construction – Negligible adverse Years 1-10 – Negligible adverse Year 10 onwards – Negligible adverse and Not Significant		
Cultural Landsca Farmland	Cultural Landscape Services FLNTCLS103 Llanfynydd to Higher Kinnerton		
Location and Natural Resources Wales description, evaluation and other notes	An aspect area occupying the south of the Study Area and extending between 2.3km and 5.3km south of the Site boundary. Answers/evaluations to the LANDMAP survey questions regarding cultural interest in the aspect area are generally 'moderate' or 'no answer', but with some higher quality geological, landscape habitat and historical elements.		
Summary of Effects	Within the north and east of the aspect area the Proposed Development would be visible, but it would appear as an extension of the existing Padeswood Cement Works in a semi-urban landscape. The Proposed Development would not be visible from the south west of the aspect area. There would be no direct effects on this aspect area.		
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – N/A; Value – Community Susceptibility – Low		



Landscape Effec	ets on LANDMAP Cultural Landscape Services Datasets
	Sensitivity – Low
Scale, extent and duration of change	Construction – Negligible and localised –Negligible short-term Years 1-10 – Negligible and localised –Negligible medium-term Year 10 onwards – Negligible and localised – Negligible long- term
Magnitude of Change	Construction – Negligible Years 1-10 – Negligible Year 10 onwards – Negligible
Level of effect	Construction – Negligible adverse Years 1-10 – Negligible adverse Year 10 onwards – Negligible adverse and Not Significant
Cultural Landsca	ape Services FLNTCLS111 Llanfynydd Narrow Valley
Location and Natural Resources Wales description,	A narrow strip of an aspect area occupying the Llanfynydd Valley to the east of Leeswood extending between 1.2km and 3.2km from the Site boundary, within the south west of the Study Area. Answers/evaluations to the LANDMAP survey questions
evaluation and other notes	regarding cultural interest in the aspect area are generally 'high', and the area is considered to have a higher overall value than other cultural landscape service aspect areas in the Study Area.
Summary of Effects	Due to the wooded nature of the valley, the Proposed Development would only be visible from a small area within the east of the aspect area, where it would appear as an extension of the existing Padeswood Cement Works in a semi-urban landscape. There would be no direct effects on this aspect area.
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – N/A; Value – Regional Susceptibility – Low Sensitivity – Medium/ Low
Scale, extent and duration of change	Construction – Negligible and limited –Negligible short-term Years 1-10 – Negligible and limited –Negligible medium-term Year 10 onwards – Negligible and limited – Negligible long- term
Magnitude of Change	Construction – Negligible Years 1-10 – Negligible Year 10 onwards – Negligible
Level of effect	Construction – Negligible adverse Years 1-10 – Negligible adverse Year 10 onwards – Negligible adverse and Not Significant
Cultural Landsca	ape Services FLNTCLS100 Hope Mountain



Landscape Effec	Landscape Effects on LANDMAP Cultural Landscape Services Datasets	
Location and Natural Resources Wales description, evaluation and other notes	An aspect area occupying the south of the Study Area and extending between 2.5km and 5.9km south of the Site boundary, focused around the high ground of Hope Mountain. Answers/evaluations to the LANDMAP survey questions regarding cultural interest in the aspect area are generally 'moderate' or 'no answer', but with some higher quality geological, landscape habitat and historical elements.	
Summary of Effects	On the north facing slopes of Hope Mountain within the north and east of the aspect area the Proposed Development would be visible, but it would appear as an extension of the existing Padeswood Cement Works in a semi-urban landscape. The Proposed Development would not be visible from the south west and south of the aspect area. There would be no direct effects on this aspect area.	
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – N/A; Value – Community Susceptibility – Low Sensitivity – Low	
Scale, extent and duration of change	Construction – Negligible and localised –Negligible short-term Years 1-10 – Negligible and localised –Negligible medium-term Year 10 onwards – Negligible and localised – Negligible long-term	
Magnitude of Change	Construction – Negligible Years 1-10 – Negligible Year 10 onwards – Negligible	
Level of effect	Construction – Negligible adverse Years 1-10 – Negligible adverse Year 10 onwards – Negligible adverse and Not Significant	
Cultural Landsca	ape Services FLNTCLS140 Mold Southern Fringe Farmland	
Location and Natural Resources Wales description, evaluation and other notes	A large aspect area occupying the rural landscape to the north and west of Leeswood extending between 1.5km and 4.8km from the Site boundary, over the south west of the Study Area. Answers/evaluations to the LANDMAP survey questions regarding cultural interest in the aspect area are generally 'moderate', but with some higher quality historical elements.	
Summary of Effects	Over smaller areas within the east of the aspect area the Proposed Development would be visible, but it would appear as an extension of the existing Padeswood Cement Works in a semi-urban landscape. The Proposed Development would not be visible from the majority of the aspect area. There would be no direct effects on this aspect area.	



Landscape Effec	ts on LANDMAP Cultural Landscape Services Datasets
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – N/A; Value – Community Susceptibility – Low Sensitivity – Low
Scale, extent and duration of change	Construction – Negligible and limited –Negligible short-term Years 1-10 – Negligible and limited –Negligible medium-term Year 10 onwards – Negligible and limited – Negligible long-term
Magnitude of Change	Construction – Negligible Years 1-10 – Negligible Year 10 onwards – Negligible
Level of effect	Construction – Negligible adverse Years 1-10 – Negligible adverse Year 10 onwards – Negligible adverse and Not Significant
Cultural Landsca	ape Services FLNTCLS030 Unnamed (region Flintshire)
Location and Natural Resources Wales description, evaluation and other notes	The aspect area occupies a strip of landscape between 1.3km and 4.1km from the south of the Site boundary. Answers/evaluations to the LANDMAP survey questions regarding cultural interest in the aspect area are predominantly 'low', but with some higher quality geological, landscape habitat and historical elements.
Summary of Effects	Within the aspect area the Proposed Development would occasionally be visible, but it would appear as an extension of the existing Padeswood Cement Works in a semi-urban landscape. There would be no direct effects on this aspect area.
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – N/A; Value – Community Susceptibility – Low Sensitivity – Low
Scale, extent and duration of change	Construction – Negligible and localised –Negligible short-term Years 1-10 – Negligible and localised –Negligible medium-term Year 10 onwards – Negligible and localised – Negligible long-term
Magnitude of Change	Construction – Negligible Years 1-10 – Negligible Year 10 onwards – Negligible
Level of effect	Construction – Negligible adverse Years 1-10 – Negligible adverse Year 10 onwards – Negligible adverse and Not Significant
Cultural Landsca	ape Services FLNTCLS062 Unnamed (region Flintshire)



Landscape Effec	ets on LANDMAP Cultural Landscape Services Datasets
Location and Natural Resources Wales description, evaluation and other notes	Occupies an area in the north west of the Study Area between 800m and 4km from the Site. Answers/evaluations to the LANDMAP survey questions regarding cultural interest in the aspect area are either 'moderate' or 'no answer'.
Summary of Effects	Small and isolated locations in the aspect area are within the ZTV. There would be no effect on this aspect area.
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – N/A; Value – Community Susceptibility – Low Sensitivity – Low
Scale, extent and duration of change	Construction – No change Years 1-10 – No change Year 10 onwards – No change
Magnitude of Change	Construction – No change Years 1-10 – No change Year 10 onwards – No change
Level of effect	Construction – None Years 1-10 – None Year 10 onwards – None
Cultural Landsca	ape Services FLNTCLS069 Unnamed (region Flintshire)
Location and Natural Resources Wales description, evaluation and other notes	A small aspect area in the south-west of the Study Area, coincident with the village of Leeswood, between 2.3km and 3.3km south west of the Site boundary. Answers/evaluations to the LANDMAP survey questions regarding cultural interest in the aspect area are generally 'moderate' or 'no answer', but with some higher quality historical elements.
Summary of Effects	Within the aspect area the Proposed Development would only occasionally be visible, with views largely screened by existing built form and woodland. When visible the Proposed Development would appear as an extension of the existing Padeswood Cement Works in a semi-urban landscape. There would be no direct effects on this aspect area.
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – N/A; Value – Community Susceptibility – Low Sensitivity – Low
Scale, extent and duration of change	Construction – Negligible and limited –Negligible short-term Years 1-10 – Negligible and limited –Negligible medium-term Year 10 onwards – Negligible and limited – Negligible long- term



Landscape Effec	ets on LANDMAP Cultural Landscape Services Datasets
Magnitude of Change	Construction – Negligible Years 1-10 – Negligible Year 10 onwards – Negligible
Level of effect	Construction – Negligible adverse Years 1-10 – Negligible adverse Year 10 onwards – Negligible adverse and Not Significant
Cultural Landsca	ape Services FLNTCLS029 Treuddyn Rolling Farmland
Location and Natural Resources Wales description, evaluation and other notes	An aspect area occupying the west of the Study Area and extending between 900m and 4.9km west of the Site boundary, over the rural landscape between Padeswood, Mold and Buckley. Answers/evaluations to the LANDMAP survey questions regarding cultural interest in the aspect area are generally 'low' or 'no answer', but with some higher quality geological and landscape habitat elements.
Summary of Effects	Within the majority of the aspect area the Proposed Development would be visible, but it would appear as an extension of the existing Padeswood Cement Works in a semi- urban landscape. There would be no direct effects on this aspect area.
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – N/A; Value – Community Susceptibility – Low Sensitivity – Low
Scale, extent and duration of change	Construction – Negligible and localised –Negligible short-term Years 1-10 – Negligible and localised –Negligible medium-term Year 10 onwards – Negligible and localised – Negligible long-term
Magnitude of Change	Construction – Negligible Years 1-10 – Negligible Year 10 onwards – Negligible
Level of effect	Construction – Negligible adverse Years 1-10 – Negligible adverse Year 10 onwards – Negligible adverse and Not Significant

Table 1.6 Landscape Effects on LANDMAP Visual and Sensory Datasets

Landscape Effects on LANDMAP Datasets	
Visual and Sensory FLNTVS009 Unnamed (region Flintshire)	
Location and Natural Resources Wales	Occupies a large area of land within the centre and north of the Study Area and encloses the town of Buckley (which is not in the aspect area). The Site is within this aspect area.



Landscape Effec	ets on LANDMAP Datasets
description, evaluation and other notes See viewpoints 1, 3, 4, 7, 8, 9 and 11	Farmland Fringe - gently rolling lowland farmland with a mixture of small traditional fields, larger more improved fields and urban and fringe uses including currently unused quarries and golf courses. There is a large cement works in the southern part of the area. This has large structures, which are locally prominent, rising out of the predominantly rural landscape. There are attractive and detractive views in and out of the aspect area. The cement works is a detractor. Guidelines/ Management – Improve screening of cement works to at least reduce the visibility of low level infrastructure. Encourage hedgerow and tree management on farms to
	improve enclosure and biodiversity. Restore quarries if now redundant with recreational and biodiversity benefits if possible.
Summary of Effects	Publicly accessible views of the Proposed Development from large areas of the aspect area to the east, west and north. However, existing vegetation would screen much of the lower level of the development. When visible the proposed flue gas stack would be viewed within the context of the existing cement works. The Proposed Development would increase the geographic area occupied by the cement works and also slightly increase the mass and bulk of visible utilitarian structures; but the new structures would not be out of scale with the existing structures and would not be an incongruous feature in the landscape.
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – Moderate Susceptibility – Medium Sensitivity – Medium/ Low
Scale, extent and duration of change	Construction – Medium and intermediate – Moderate short-term Years 1-10 – Medium and intermediate – Moderate medium-term Year 10 onwards – Medium and intermediate – Moderate long-term
Magnitude of Change	Construction – Moderate Years 1-10 – Moderate Year 10 onwards – Moderate
Level of effect	Construction – Moderate adverse Years 1-10 – Moderate adverse Year 10 onwards – Moderate adverse and Significant
Visual and Sensory FLNTVS074 Llanfynydd Narrow Valley	
Location and NRW description,	This aspect area focuses on the connecting river valleys in the south west of the Study Area and to the south of the Study Area. It is 1.2km south-west of the Site at is closest point.



Landscape Effects on LANDMAP Datasets		
evaluation and other notes	Llanfynydd and Hope valleys- Narrow sinuous wooded valleys with very steep slopes in parts and a narrow flat valley floor. The area feels intimate and enclosed. There is some pastoral farmland in small fields and riparian vegetation. Small rural villages cluster just above the valley floor and there is also scattered settlement. There are isolated areas of derelict early industrial development which are now overgrown. There are stretches where there is limited access and the area is very tranquil although other areas have minor roads on the valley floor. There are attractive views to the upper valley sides and tops. There are attractive views in and out of the aspect area, particularly from the upper valley sides which enclose the aspect area. The valley has dramatic sloping sides and pleasing and diverse vegetation patterns with positive views up and down the valley. Settlements are generally positive. The area is generally in good condition unspoilt by inappropriate development. The valley is distinctive with its steep valley sides, watercourse and clustered villages. Narrow valleys are relatively rare. Guidelines/ Management – Manage woodlands for continuous cover and nature conservation.	
Summary of Effects	Indirect effects only. Views of the Proposed Development generally imperceptible from the aspect area, screened by intervening landform and vegetation. There is the potential for very occasional glimpsed views of the tower, but only in the context of the existing cement works.	
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – High Susceptibility – Medium Sensitivity – Medium	
Scale, extent and duration of change	Construction – Negligible and limited – Negligible short-term Years 1-10 – Negligible and limited – Negligible medium-term Year 10 onwards – Negligible and limited – Negligible long- term	
Magnitude of Change	Construction – Negligible Years 1-10 – Negligible Year 10 onwards – Negligible	
Level of effect	Construction – Negligible adverse Years 1-10 – Negligible adverse Year 10 onwards – Negligible adverse and Not Significant	
Visual and Sens	ory FLNTVS087 Caergwrle Slopes	
Location and Natural Resources	A small aspect area within the south of the Study Area, 3.5km south of the Site at its closest point.	



Landscape Effec	ete on LANDMAR Datasets
	cts on LANDMAP Datasets
Wales description, evaluation and other notes	Caergwrle Distinct steep scarp slope rising to 285m AOD with an undulating profile and mixture of semi-natural moorland, rough grassland and pasture, with the steeper edges covered in woodland and scrub and bracken. Very few scattered cottages lie on the slopes and the area is traversed with small lanes and footpaths. Long views to south and east. There are attractive views in and out of the aspect area, particularly from and to the lowland to the south and east. The area has a dramatic slope and pleasing and diverse vegetation patterns with positive views to the south. The area is declining in condition although unspoilt by development. The slope gives a consistent character and a strong sense of place
	although the vegetation patterns vary. The scarp slope is relatively rare as a landform in the county.
	Guidelines/ Management – Encourage management of fields to unimproved pasture.
Summary of Effects	Indirect effects only. Views of the Proposed Development would be limited to the high ground on the northern edges of the aspect area. When visible it would be viewed within the context of the existing views of the cement works and the Proposed Development would not noticeably alter the overall existing view.
Value,	LANDMAP Overall Evaluation – High
susceptibility	Susceptibility – Medium
and sensitivity	Sensitivity – Medium
Scale, extent and duration of change	Construction – Small and limited – Slight/ Negligible short-term Years 1-10 – Small and limited – Slight/ Negligible medium- term
	Year 10 onwards – Small and limited – Slight/ Negligible long- term
Magnitude of	Construction – Negligible
Change	Years 1-10 – Slight/ Negligible
	Year 10 onwards – Slight/ Negligible
Level of effect	Construction – Minor/ Negligible adverse
	Years 1-10 – Minor adverse
	Year 10 onwards – Minor adverse and Not Significant

Table 1.7 Landscape Effects on LANDMAP Historic Landscapes Datasets

Landscape Effects on LANDMAP Datasets		
Historic Landscapes FLNTHL636 Padeswood		
Location and Natural Resources	A large aspect area that hosts the bulk of the central area of the Study Area, including the Site.	



Landscape Effects on LANDMAP Datasets		
Wales description, evaluation and other notes	Area of predominantly irregular fieldscapes south of Buckley, probably representing piecemeal clearance and enclosure of farmland since at least the early medieval period onwards, between a height of 80m-100m AOD. Early settlement and land use suggested by Bronze Age burial mounds and possible ceremonial sites in the western part of the aspect area. Medieval high-status settlement indicated by dispersed earthen castle sites possibly marking early manorial centres. Wat's Dyke, an early medieval linear earthwork boundary, runs across the centre of the area. Dispersed 19th-century industrial remains including the Sites of former coalmines, brickworks, lead mines, smelt mills and limekilns. Small 17th-century and later parks and gardens associated with Pentrehobyn and Leeswood Hall, two high-status halls on the western side of the aspect area. The central part of the area is visually dominated at the modern Padeswood Cement Works. The growth of recreation in modern times is represented by the large Old Padeswood Golf Club. A mixed fieldscape with a diverse historical content but no	
	single or overriding focus. Its value is potentially slightly increased by the passage of Wat's Dyke and some post medieval gentry houses. Guidelines/ Management – None.	
Summary of Effects	There would not be any effects on the identified historic elements (Scheduled Ancient Monuments (SAM), Sites and Monuments Records (SMR), Listed Buildings and Registered Parks and Gardens (RPG)) within the aspect area. There would be no direct impacts on Wat's Dyke. There would be no discernible change to the aspect area or its evaluation.	
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – Moderate Susceptibility – Medium Sensitivity – Medium/ Low	
Scale, extent and duration of change	Construction – No change Years 1-10 – No change Year 10 onwards – No change	
Magnitude of Change	Construction – No change Years 1-10 – No change Year 10 onwards – No change	
Level of effect	Construction – None Years 1-10 – None Year 10 onwards – None	
Historic Landsca	apes FLNTHL213 Northop Hall	
Location and Natural Resources	A large aspect area occupying the north-west of the Study Area and extending outside the Study Area to the north west. 2.3km north west of the Site at its closest point.	



Landscape Effec	cts on LANDMAP Datasets		
Wales description, evaluation and other notes	Fairly level area of predominantly irregular fieldscapes with hedged boundaries north of Mold and Buckley, between a height of between 100m-150m AOD and probably representing piecemeal clearance and enclosure since at least the early medieval period onwards. Small areas of broadleaved and mixed woodland plantation of 20th-century date. Prehistoric settlement and land use suggested by dispersed lithic chance finds and Bronze Age burial sites. Wat's Dyke, an early medieval linear earthwork boundary, runs across the western side of the area. Modern settlement represented by scattered farmsteads of 18th-century and later date and the small nucleated settlements of possible early medieval or medieval origin at Northop and Soughton and the 18th and 19th-century industrial settlements at New Brighton, Northop Hall and Ewloe Green. Dispersed 19th-century industrial remains including former coalmines, potteries, brickworks and limekilns. Some active stone quarries. Although a mixed landscape of fields and settlement in moderate condition its diverse archaeological content and consequent potential bring up its overall evaluation. Guidelines/ Management – None.		
Summary of Effects	There would not be any effects on the identified historic elements (SAM, SMR and Listed Buildings) within the aspect area. There would be no discernible change to the aspect area or its evaluation.		
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – High Susceptibility – Medium Sensitivity – Medium		
Scale, extent and duration of change	Construction – No change Years 1-10 – No change Year 10 onwards – No change		
Magnitude of Change	Construction – No change Years 1-10 – No change Year 10 onwards – No change		
Level of effect	Construction – None Years 1-10 – None Year 10 onwards – None		
Historic Landsca	Historic Landscapes FLNTHL745 Kinnerton		
Location and Natural Resources Wales description, evaluation and other notes	A large aspect area occupying the south east of the Study Area, 2.3km south east of the Site at its closest point. Relatively flat and low-lying fieldscapes along the eastern border of the county, to the east of Bretton and Hope, between a height of 10m-90m AOD. Diverse fieldscape types of different periods including irregular fields representing more ancient piecemeal clearance and enclosure of farmland		



Landscano Effec	te on LANDMAD Datasets
Lanuscape Effec	ets on LANDMAP Datasets
	possibly of medieval and later date, reorganised strip fields representing the enclosure of former medieval open fields with some remnant ridge and furrow, and straight-sided fields representing later 18th and 19th-century enclosure, landscape reorganisation or drainage and reclamation. Field boundaries mostly hedged. Scattered post-medieval marl pits, of which many survive as small ponds. Small areas of broadleaved and mixed woodland and strip plantation. Modern settlement represented by scattered farmsteads mostly of 18th and 19th-century date and by the small nucleated settlements at Higher Kinnerton and Bretton which are ultimately of early medieval origin. Medieval high-status rural settlement represented by moated sites. Wat's Dyke, an early medieval linear earthwork boundary, runs through the south western part of the area. Remains of Cold War defence site at Dodlestone.
	A large and diverse area of fieldscapes containing a number of historical and archaeological features.
Summary of Effects	Guidelines/ Management – None. There would not be any effects on the identified historic elements (SAM, SMR and Listed Buildings) within the aspect area. There would be no discernible change to the aspect area
.,,,	or its evaluation.
Value, susceptibility	LANDMAP Overall Evaluation – High
and sensitivity	Susceptibility – Medium Sensitivity – Medium
Scale, extent	Construction – No change
and duration of	Years 1-10 – No change
change	Year 10 onwards – No change
Magnitude of	Construction – No change
Change	Years 1-10 – No change
	Year 10 onwards – No change
Level of effect	Construction – None
	Years 1-10 – None
	Year 10 onwards – None
Historic Landsca	pes FLNTHL579 Caergwle and Hope
Location and Natural Resources Wales description, evaluation and other notes	A small narrow aspect area within the south east of the Study Area, 2.7km south east of the Site at its closest point.
	Modern contiguous settlements of Caergwrle and Hope, including small sinuous strips of residual ancient semi-natural woodland and ancient replanted woodland on some of the more steeply-sloping land. Wat's Dyke, an early medieval linear earthwork boundary, runs along part of the eastern boundary of the area. Early settlement and land use are represented by Prehistoric and Roman chance finds, including the remarkable late Bronze Age shale bowl inlaid with gold leaf, possibly representing a votive deposit placed in boggy



Landscape Effects on LANDMAP Datasets		
	ground during drainage works close to the river Alyn. Hope appears to have originated as a small nucleated church settlement in the early medieval period. The settlement at Caergwrle originated as a small late 13th-century planted town established next to the stone castle established in the 1270s and which, together with Hope, underwent expansion primarily for workers housing during the course of the 19th and 20th centuries in association with local extractive and manufacturing industries.	
	The combination of early medieval foci of these conjoined villages and the extant Caergwle Castle make this an important regional settlement with an outstanding value. Guidelines/ Management – None.	
Summary of Effects	There would not be any effects on the identified historic elements (SAM, SMR and Listed Buildings) within the aspect area. There would be no discernible change to the aspect area or its evaluation.	
Value,	LANDMAP Overall Evaluation – Outstanding	
susceptibility and sensitivity	Susceptibility – Medium Sensitivity – High/ Medium	
Scale, extent	Construction – No change	
and duration of	Years 1-10 – No change	
change	Year 10 onwards – No change	
Magnitude of	Construction – No change	
Change	Years 1-10 – No change	
	Year 10 onwards – No change	
Level of effect	Construction – None	
	Years 1-10 – None	
	Year 10 onwards – None	
Historic Landscapes FLNTHL953 Mold		
Location and Natural	A moderate sized aspect area coincident with the town of Mold, the eastern edge of which is 4.1km west of the Site.	
Resources Wales description, evaluation and	Small modern urban centre forming important regional centre with administrative, commercial and industrial and cultural functions. Prehistoric activity in the general area indicated by the elaborate early to middle Bronze Age ceremonial gold cape	

settlement core.

found in a barrow on the eastern outskirts of the town.

Important medieval remains including motte and bailey castle, church of medieval origins and potential buried deposits associated with medieval settlement and commercial activity. 19th-century and later houses, nonconformist chapels, schools and administrative buildings. Extensive modern housing and commercial developments around the periphery of the earlier

A small town with clear medieval origins and a number of other historic elements, but also with considerable mixed modern

other notes



Landscape Effects on LANDMAP Datasets		
development masking some earlier features.		
	Guidelines/ Management – None.	
Summary of Effects	There would not be any effects on the identified historic elements (SAM, SMR and Listed Buildings) within the aspect area. There would be no discernible change to the aspect area or its evaluation.	
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – High	
	Susceptibility – Medium	
	Sensitivity – Medium	
Scale, extent and duration of change	Construction – No change	
	Years 1-10 – No change	
	Year 10 onwards – No change	
Magnitude of Change	Construction – No change	
	Years 1-10 – No change	
	Year 10 onwards – No change	
Level of effect	Construction – None	
	Years 1-10 – None	
	Year 10 onwards – None	
Historic Landsca	pes FLNTHL349 Lleeswood	
Location and Natural Resources Wales description, evaluation and other notes	A large aspect area which covers the south and west of the Study Area and extends 7km south and 12km west of the Site. The northern edge of the aspect area is 900m south of the Site boundary. Diverse fieldscapes on the undulating upland and lowland west of Hope and Caergwrle and south of Mold, between a height of about 100m-300m above sea level, deeply dissected by stream and river valleys. Diverse fieldscape types, mostly with hedged boundaries but with drystone walls on some of the higher, more recently enclosed land. The predominantly irregular fieldscape types probably represent a process of piecemeal clearance and enclosure from at least the medieval period onwards. Other fieldscape types include probably reorganised strip fields representing the post-medieval enclosure of former medieval open fields and distinctive areas of straight-sided fields representing later 18th and 19th-century enclosure of formerly unenclosed common land. Possible residual ancient semi-natural woodland and ancient replanted woodland represented by sinuous broadleaved woodland along stream valleys and on steeper slopes. Early settlement and land use is suggested by Neolithic chance finds.	
	and land use is suggested by Neolithic chance finds. Extensive area of irregular fields with considerable archaeological and historical content, including the northern end of Offa's Dyke, a number of smaller parks and gardens and medieval and later settlements. To some extent its overall value is increased by its size. Guidelines/ Management – None.	



Landscape Effects on LANDMAP Datasets	
Summary of Effects	There would not be any effects on the identified historic elements (SAM, SMR, Registered Parks and Gardens, and Listed Buildings) within the aspect area. There would be no discernible change to the aspect area or its evaluation.
Value, susceptibility and sensitivity	LANDMAP Overall Evaluation – High
	Susceptibility – Medium
	Sensitivity – Medium
Scale, extent and duration of change	Construction – No change
	Years 1-10 – No change
	Year 10 onwards – No change
Magnitude of Change	Construction – No change
	Years 1-10 – No change
	Year 10 onwards – No change
Level of effect	Construction – None
	Years 1-10 – None
	Year 10 onwards – None





2 **SUMMARY**

2.1 This appendix provides details of the LANDMAP datasets within the Study Area and whether they are scoped in or out of the LVIA. For those LANDMAP datasets scoped in, the appendix details the name, reference, location information, a brief summary of effects and level of effect on the dataset.





References

Natural Resources Wales (2023). *Using LANDMAP in Landscape and Visual Impact Assessments GN46*. Available at: <a href="https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/evidence-to-inform-development-planning/using-landmap-in-landscape-and-visual-impact-assessments-gn46/?lang=en

