5 Lighting

‘The delivery of a co-ordinated effective and imaginative lighting strategy that brings the town centre to life at night’.

The Existing Lighting Picture: Overview

The view towards Macclesfield Town Centre from the Train Station during the day is pleasant enough as your eye is drawn away from the profusion of street lighting columns in Waters Green (particularly concentrated around the Station Car Park), towards the elevated centre of the town which is dominated by the attractive tower of the church of St Michael and All Angels. However, this picture is completely turned around when viewed at night. The many coloured sources of light, both from street lights and lighting to buildings dominates the foreground of Waters Green and the upper level of the town is shrouded in darkness.

Macclesfield, like many towns in the UK has, from a lighting point of view, evolved into a disjointed town probably caused to a large extent by development or areas, with no overall coordinated lighting strategy.

The roads that carry traffic around and into Macclesfield namely, Churchill Way, Hibbel Road, Park Street leading to Sunderland Street and Waters Green are lit with high pressure sodium (pink light), or son, from single head 10 metre high pole top luminaries. However, there are the occasional ‘guest’ appearances from a few low pressure (orange light) or SON & SOX street lights, in particular at the junction of Great King Street and Churchill Way, where there is also a particularly nasty open faced high level metal halide, (white light) luminaire onto the car park area adjacent to Churchill Way. Waters Green also has a mixture of light sources with low pressure sodium street lights leading up to the bus station at the top of Queen Victoria Street.

The mass of street columns and it signs in Waters Green have as a backdrop a number of buildings which have been also lit. These are, the metal halide (white light), downlighting and low pressure sodium (orange light), uplighting to the Nag’s Head pub, the metal halide downlighting of the estate agents building and the Queens Hotel pink downlighting scheme.

Whilst a full lighting survey has not been undertaken of every street within the public realm area strategy area, the lighting of the residential streets within the boundary is generally accomplished using low pressure sodium luminaries on 5-6 metre columns. Again, this is not an uncommon feature of most residential streets in many towns across the UK.

The lighting of the pedestrianised streets, namely Market Place, Mill Street and Chestergate highlight the need for an overall lighting strategy. Particularly the two retail streets, Mill Street and Chestergate which lead towards the civic and cultural centre - the market place. The traditional style double headed “Windsor” lanterns in Market Place are arguably not inappropriate but are scaled incorrectly for the wide thoroughfare. The colour of light could also be questioned. There are a number of buildings, including the Town Hall and St Michael and All Angels Church of particular architectural merit within the market palace and if lit in a sympathetic way they would provide the town with the attractive centre, which it deserves. Warm white light should be the chosen light source for the buildings and it would be unfortunate if the same colour of light was not chosen for the street lighting. The ugly high level bulkhead fixtures should be removed as they provide little adequate light and a lot of glare.

The use of the traditional style lanterns in Chestergate is perhaps inappropriate due to the relative narrowness of the thoroughfare. An appropriately sourced luminaire which provides light to where it is needed on the thoroughfare would greatly benefit the street.

Mill Street also utilises the high level bulkhead luminaries to provide “street lighting”, but as mentioned before, the lighting function they perform is inadequate at best. As the street is pedestrianised only at certain times, it may be necessary to provide a wall mounted luminaire which directs white light onto the areas of the street where needed.

These examples alone are evidence that a lighting overhaul, if not a completely new lighting concept, is long overdue for Macclesfield.
Figure 14: Existing lighting provision

Plan showing locations of existing lighting examples

A. Out of scale pole top luminaire to residential area.
B. Distracting and inappropriate coloured lighting to shop front in cultural town.
C. Floodlighting of town hall from adjacent street lanterns (not working)
D. Poor quality luminaires to linking passage.
E. Out of scale pole luminaire to pedestrianised area.
F. Floodlighting of heritage centre and silk museum from adjacent street lanterns.
G. Poorly maintained street lighting (Luminaire hidden by tree foliage).
H. Poorly maintained building facade lighting.
J. Existing floodlighting of church provided by only one luminaire (Not working).
K. High level bulkhead providing little useful light and plenty of glare.
L. Concentration of light sources in Waters Green area but no lighting to elevated area of town.
M. Daytime appearance of St Michael and All Angels Church from Waters Green.
N. Inappropriate coloured lighting to building facade.
O. Daytime appearance of high level 'street Lights' in Mill Street.
P. Open faced high level luminaire.
Q. Open faced luminaire on poles to car park providing unacceptable glare.
Proposed Lighting Strategy

A photographic survey of Macclesfield town centre, during daylight and after dark has been undertaken (see figure 14). The main streets and areas that require an updated lighting scheme have been identified along with other important routes into Macclesfield town centre.

Existing street lighting has been assessed within the areas.

The strategy sets out technical and aesthetic criteria for lighting in the public realm and includes the lighting of key spaces, connecting routes and key buildings in the town centre and surrounding districts as set out above.

The lighting strategy considers:
- The use of lighting to improve civic pride for Macclesfield
- The colour of light
- The direction of light to selected items of interest
- The effect of light on building materials
- Energy consumption
- Luminaire and light source efficiency
- The sensitive location of lighting equipment in relation to both architecture and environment

Lighting Objectives

- To emphasise the key routes from Macclesfield town centre to surrounding areas
- To enhance the character of the space
- To co-ordinate with other elements of urban design and street furniture
- Improving the quality of public lighting on the primary pedestrian streets
- Using light creatively to highlight landmark buildings, architectural items of interest, evening activities and key public spaces

Day and Night Time Appearance

Lighting equipment should be appropriate to pedestrian scale and be sympathetic to the local environment.

Street lighting should provide adequate lighting for pedestrians and meet the current British Standard for road lighting. Lighting should also be of a standard to provide effective vision for CCTV cameras. Enhancement lighting should be effective but sympathetic to the surrounding environment (refer to figure 15).

Key Themes

It is intended that the lighting strategy should reinforce the existing local identity of Macclesfield by highlighting local landmarks, clearly defining key pedestrian routes and highlighting public spaces (refer to figure 16).

New night time views and vistas will be revealed and existing landmarks made more distinctive, to make the town more legible at night and assist in orientation and way finding.

Revealing and enhancing the existing architectural heritage of Macclesfield at night will also engender a feeling of local pride and create a lively and stimulating night time environment for all who use the town centre.

Lighting should respond to human scale and human activity. The strategy will ensure that places are well lit for pedestrians. By lighting the perimeter of key public spaces, the environment will feel safer and less threatening at night. This will encourage people to make greater use of the town centre for leisure activities after dark.

Careful detailing is also important to enhance the public realm. Lighting elements should be carefully co-ordinated with signage, street furniture and other landscaping elements to create a distinctive and high quality urban environment.

Care should be taken to avoid unnecessary light pollution, by the considered application of carefully controlled lighting that avoids unnecessary light spill and light trespass.

Key corridor routes can be enhanced by:
- Using a contrasting and distinctive colour of light
- Using a distinctive luminaire design
- Considering local environment and context (one lighting solution may not suit all applications)
- Incorporating marker lights or other pedestrian scale design elements into the design
- Sensitive and appropriate architectural lighting
- Using a distinctive colour of light that contrasts with the surrounding environment
- Considering the whole environment in context
- Highlighting buildings of architectural merit
- Creating a feeling of safety and security

Colour of Light and Aesthetics of Luminaire

The architectural lighting of 5 no. key buildings in Macclesfield to be achieved using warm white light from metal halide and tungsten halogen light sources (see figure 17). Christchurch Tower could be lit with high pressure sodium or pink light to enhance the appearance of the building brick.

To compliment the warm white light and create an attractive night time ambience consideration should be given to using a new lamp and optics system recently introduced onto the market place, examples of lighting effects are shown in this document.

The system uses bright natural white light with excellent colour rendering properties to improve safety and security, both for pedestrians and road traffic. A comprehensive range of luminaries with various distributions and optics are available for all applications within the public realm.
Figure 15: Lighting Strategy: Circulation routes

Luminaire Types A, B, C and D Image showing ‘Cosmopolis’ light source

Type A: Free standing road luminaire to be located on High Road, Chelford Way and Sutherland Street.

Type B: Free standing decorative pedestrian luminaire in Chestergate and public spaces (with road lighting reflector when necessary).

Type C: Decorative wall-mounted lighting bracket to Mill Street.

Type D: Be a recent.
Figure 16:
Lighting Strategy: Feature LED lighting to key circulation routes

Feature lighting can be used creatively to impart identity. These images are indicative only.
Figure 17: Lighting Strategy: Landmark buildings

Landmark buildings for which architectural contextual lighting schemes have been suggested.
St. Michael & All Angels Church:
- All four faces of tower to be washed in warm white light from positions on adjacent buildings and in-ground uplights.
- Louvred openings to be lit from behind with contrast white light.
- Clock faces to be lit with contrast white light (spotlight from adjacent buildings).
- Uplighting in warm white to windows and main door.
Note: Building needs cleaning before lighting.

Christchurch:
- Clock faces to be lit with warm white contrast light.
- Louvred openings to be lit from behind with contrast warm white light.
- High pressure sodium (pink) lighting to enhance the brickwork of the tower (all four sides).

Town Hall (Market Place)
- Uplighting to the side of columns.
- Strong uplighting to stone behind columns silhouetting front face of columns.
- Gentle wash of warm white light to those below cornice and projecting pediment.
- Contrast white lights to flag and pole.

Town Hall (Church Side Elevation):
- Uplighting to the side of columns.
- Strong uplighting to stone behind columns silhouetting front face of columns.
- Gentle wash of warm white light to those below cornice and projecting pediment.
- Contrast white lights to flag and pole.

Paradise Mill:
- Uplighting to decorative doorway surround and decorative corner of building from in-ground fixtures.
- Uplighting to decorative window and decorative features from small and discreet uplights.
- Glass rooflight lit from within coloured (blue) lighting.

Heritage Centre & Silk Museum:
- Window reveal lighting to all windows.
- Gentle wash of warm white light to rust.
- Sign to be lit in contrast white.

Paradise Mill:
- Uplighting from in-ground fixtures to decorate piers and main entrance door surround.
- Uplighting to main window above door entrance and at first floor level.